

07/24/01

1c928 U.S. PTO

Please type a plus sign (+) inside this box → ☐Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 3994994-131915

First Inventor Ting He

Title Substrates with Small Particle...

Express Mail Label No. EL749133655US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 21]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
5. Oath or Declaration [Total Pages ]
- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:**Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement of Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 [Copies of IDS Citations]
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Prior application information:

Examiner \_\_\_\_\_

Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**☒ Customer Number or Bar Code Labelor ☐ Correspondence address below

Name Edwin M. Baranowski

Address Porter Wright Morris & Arthur LLP  
41 South High Street

City Columbus State Ohio Zip Code 43215

Country USA Telephone 614-227-2188 Fax 227-2100

Name (Print/Type) Edwip M. Baranowski Registration No. (Attorney/Agent) 27,482

Signature *Edwip M. Baranowski* Date 24 July 01

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PORTER WRIGHT MORRIS & ARTHUR<sup>LLP</sup>  
Attorneys & Counselors at Law

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Patents and Trademarks  
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Toll Free: 800-533-2794

By Express Mail Receipt No. EL749133655US on July 24, 2001

Box Patent Application  
Commissioner for Patents  
Washington, D.C. 20231

Re: Inventor: Ting He  
Serial Number: To be assigned  
Filed: July 24, 2001  
Title: SUBSTRATES WITH SMALL PARTICLE SIZE METAL OXIDE WITH  
NOBLE METAL CATALYST COATINGS AND THERMAL SPRAYING  
METHODS FOR PRODUCING THE SAME

Dear Sir:

For filing, we are enclosing the following in the above-referenced application for United States Letters Patent:

1. Utility Patent Application Transmittal Form PTO/SB/05
2. Fee Transmittal Form PTO/SB/17, including Authorization re: Deposit Account 16-2326 (in duplicate)
3. Application for United States Letters Patent (21 pages, 23 claims); Abstract; 5 sheets of drawings (Figures 1A, 1B, 2A, 2B, 3A, 3B, 4)

The Declaration and Power of Attorney will be filed at a later date.

A Certificate of Filing by Express Mail follows on page 2 of this cover letter.

Please acknowledge receipt of the foregoing by stamping the enclosed postcard and returning it to us for our file.

Very truly yours,



Edwin M. Baranowski

Enclosures

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**FEE TRANSMITTAL**  
**for FY 2001**

Patent fees are subject to annual revision.

**Complete if Known**

|                      |                |
|----------------------|----------------|
| Application Number   |                |
| Filing Date          | 24 July 2001   |
| First Named Inventor | Ting He        |
| Examiner Name        |                |
| Group Art Unit       |                |
| Attorney Docket No.  | 3994994-131915 |

TOTAL AMOUNT OF PAYMENT (\$)  
**1,474****METHOD OF PAYMENT**

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

|                        |                               |
|------------------------|-------------------------------|
| Deposit Account Number | 16-2326                       |
| Deposit Account Name   | Porter Wright Morris & Arthur |

- ☒
- Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17

☐ Applicant claims small entity status. See 37 CFR 1.27

- 2.
- ☐
- Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

| Large Entity |          | Small Entity |          | Fee Description        | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |                        |          |
| 101          | 710      | 201          | 355      | Utility filing fee     | 710      |
| 106          | 320      | 206          | 160      | Design filing fee      |          |
| 107          | 490      | 207          | 245      | Plant filing fee       |          |
| 108          | 710      | 208          | 355      | Reissue filing fee     |          |
| 114          | 150      | 214          | 75       | Provisional filing fee |          |

SUBTOTAL (1) (\$)  
**710****2. EXTRA CLAIM FEES**

| Total Claims | Extra Claims | Fee from below | Fee Paid |
|--------------|--------------|----------------|----------|
| 43           | -20** = 23   | 18             | 414      |
| 4            | -3** = 1     | 80             | 80       |
|              |              | 270            | 270      |

| Large Entity |          | Small Entity |          | Fee Description  |
|--------------|----------|--------------|----------|--|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |
| 103          | 18       | 203          | 9        | Claims in excess of 20                                     |
| 102          | 80       | 202          | 40       | Independent claims in excess of 3                          |
| 104          | 270      | 204          | 135      | Multiple dependent claim, if not paid                      |
| 109          | 80       | 209          | 40       | ** Reissue independent claims over original patent         |
| 110          | 18       | 210          | 9        | ** Reissue claims in excess of 20 and over original patent |

SUBTOTAL (2) (\$)  
**764**

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 105          | 130      | 205          | 65       | Surcharge - late filing fee or oath  |          |
| 127          | 50       | 227          | 25       | Surcharge - late provisional filing fee or cover sheet                     |          |
| 139          | 130      | 139          | 130      | Non-English specification  |          |
| 147          | 2,520    | 147          | 2,520    | For filing a request for <i>ex parte</i> reexamination                     |          |
| 112          | 920*     | 112          | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 113          | 1,840*   | 113          | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 115          | 110      | 215          | 55       | Extension for reply within first month                                     |          |
| 116          | 390      | 216          | 195      | Extension for reply within second month                                    |          |
| 117          | 890      | 217          | 445      | Extension for reply within third month                                     |          |
| 118          | 1,390    | 218          | 695      | Extension for reply within fourth month                                    |          |
| 128          | 1,890    | 228          | 945      | Extension for reply within fifth month                                     |          |
| 119          | 310      | 219          | 155      | Notice of Appeal   |          |
| 120          | 310      | 220          | 155      | Filing a brief in support of an appeal                                     |          |
| 121          | 270      | 221          | 135      | Request for oral hearing   |          |
| 138          | 1,510    | 138          | 1,510    | Petition to institute a public use proceeding                              |          |
| 140          | 110      | 240          | 55       | Petition to revive - unavoidable   |          |
| 141          | 1,240    | 241          | 620      | Petition to revive - unintentional   |          |
| 142          | 1,240    | 242          | 620      | Utility issue fee (or reissue)   |          |
| 143          | 440      | 243          | 220      | Design issue fee   |          |
| 144          | 600      | 244          | 300      | Plant issue fee  |          |
| 122          | 130      | 122          | 130      | Petitions to the Commissioner  |          |
| 123          | 50       | 123          | 50       | Processing fee under 37 CFR 1.17(q)  |          |
| 126          | 180      | 126          | 180      | Submission of Information Disclosure Stmt                                  |          |
| 581          | 40       | 581          | 40       | Recording each patent assignment per property (times number of properties) |          |
| 146          | 710      | 246          | 355      | Filing a submission after final rejection (37 CFR § 1.129(a))              |          |
| 149          | 710      | 249          | 355      | For each additional invention to be examined (37 CFR § 1.129(b))           |          |
| 179          | 710      | 279          | 355      | Request for Continued Examination (RCE)                                    |          |
| 169          | 900      | 169          | 900      | Request for expedited examination of a design application                  |          |

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)  
**1,474****SUBMITTED BY**

|                   |                            |                                   |              |           |              |
|-------------------|----------------------------|-----------------------------------|--------------|-----------|--------------|
| Name (Print/Type) | Edwin M. Baranowski        | Registration No. (Attorney/Agent) | 27,482       | Telephone | 614-227-2188 |
| Signature         | <i>Edwin M. Baranowski</i> | Date                              | 24 July 2001 |           |              |

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

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Box Patent Application  
Commissioner for Patents

Inventor: Ting He  
Title: SUBSTRATES WITH SMALL PARTICLE SIZE METAL OXIDE WITH NOBLE METAL  
CATALYST COATINGS AND THERMAL SPRAYING METHODS FOR PRODUCING THE  
SAME

July 24, 2001  
Page 2

**CERTIFICATE OF FILING BY EXPRESS MAIL**

I hereby certify that this Application United States Letters Patent comprising:

1. Utility Patent Application Transmittal, PTO/SB/05
2. Fee Transmittal, PTO/SB/17, including Authorization re: Deposit Account 16-2326 (in duplicate)
3. Application for United States Letters Patent (21 pages, 23 claims); Abstract; 5 sheets of drawings (Figures 1A, 1B, 2A, 2B, 3A, 3B, 4)

accompanied by an itemized postcard receipt, is being deposited with the United States Postal Service by Express Mail Receipt No. EL749133655US in an envelope addressed to: Box Patent Application, Commissioner for Patents, Washington, D.C. 20231 on July 24, 2001.

  
Edwin M. Baranowski